

(12) UK Patent Application (19) GB (11) 2 152 013 A

(43) Application published 31 Jul 1985

(21) Application No 8334495

(22) Date of filing 24 Dec 1983

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(51) INT CL⁴
B65D 43/02 21/02

(52) Domestic classification
B8P L2 N

(56) Documents cited
GB A 2108933

(58) Field of search
B8P

(54) Nestable containers

(57) A container 10 has a rim 12 and tapering side walls so that empty, unlidded containers can be nested with the vertical separation between successive containers being equal to the rim thickness. Lids can be applied to allow full containers 10 to be stacked with the base of one container resting upon the lid of the next lowermost container. The lid is hinged mid-way along its length at 42, so that it can folded double and stored in the base of an empty container 10 without affecting the nesting of adjacent containers 10.

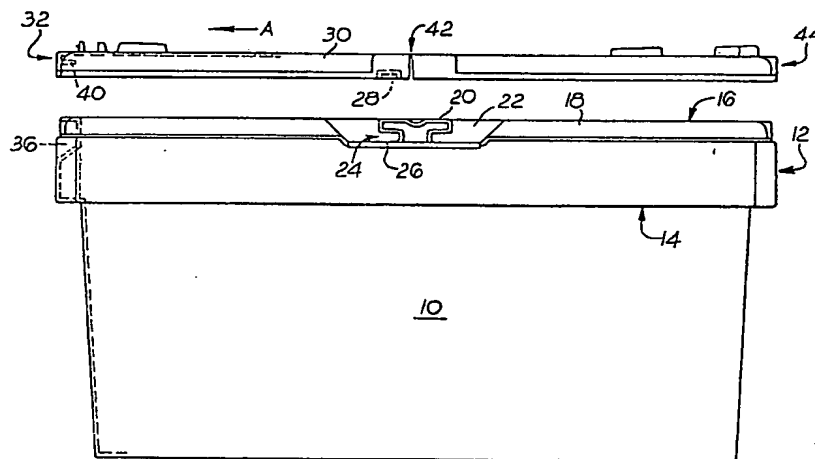


Fig. 1

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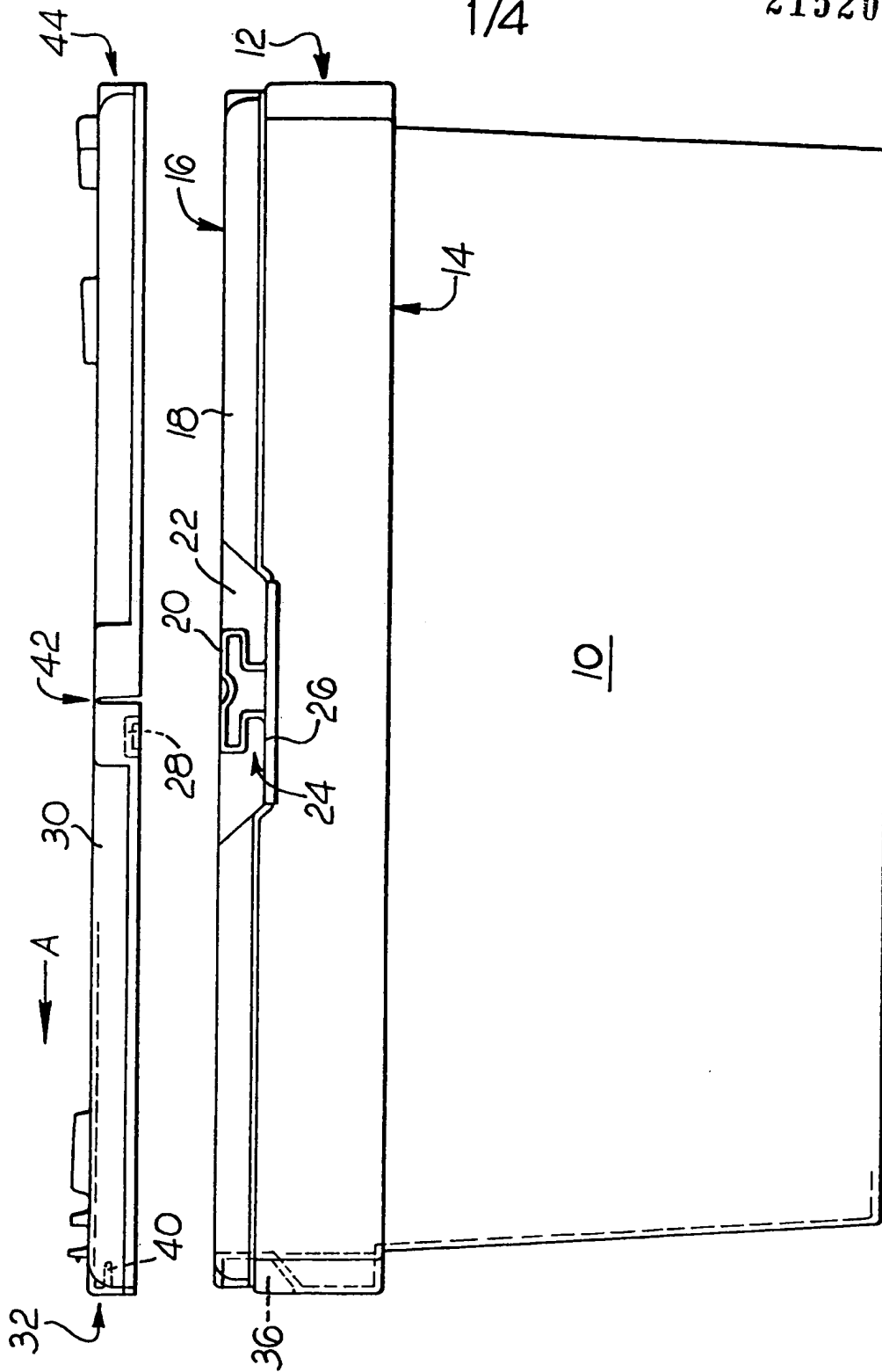


Fig. 1

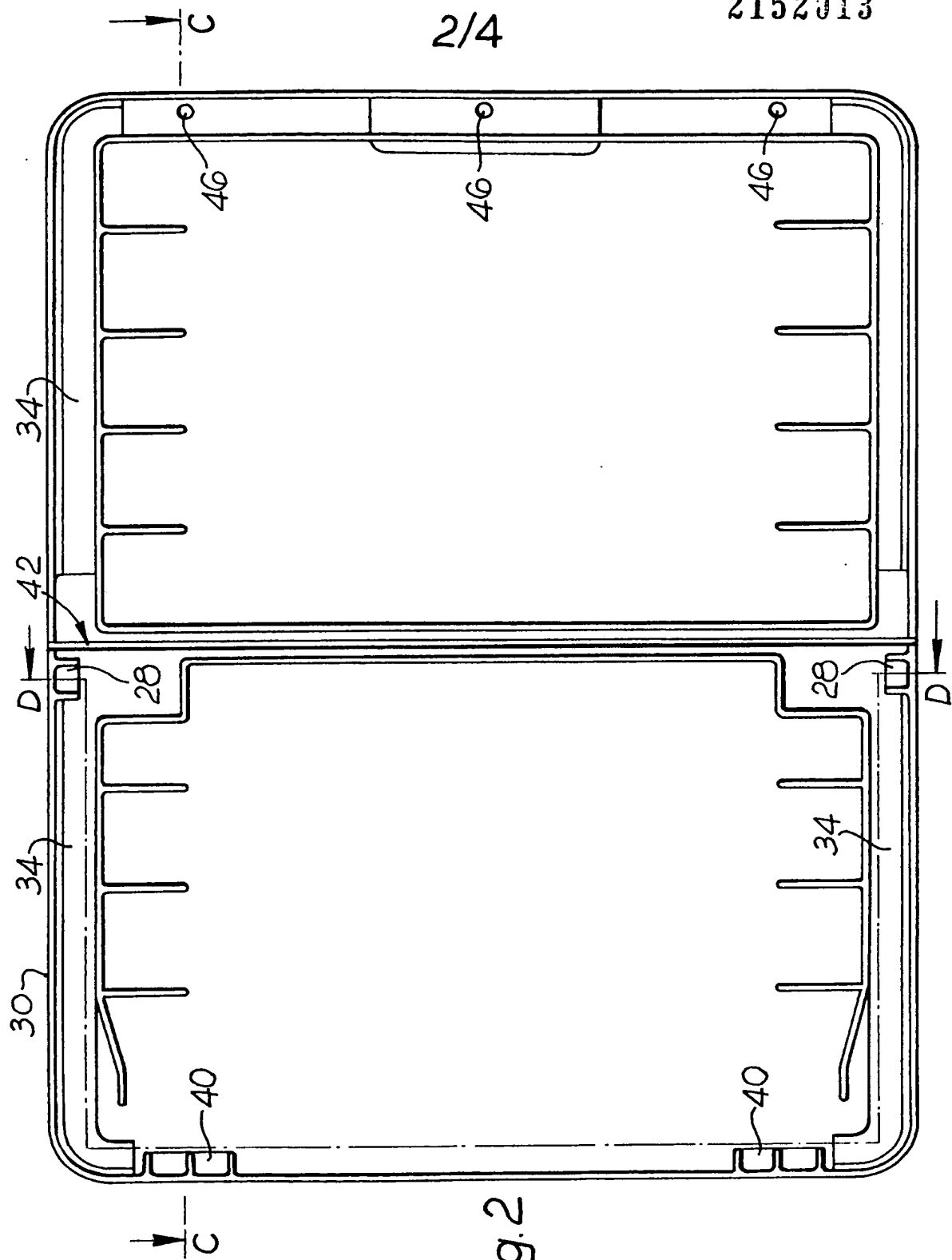
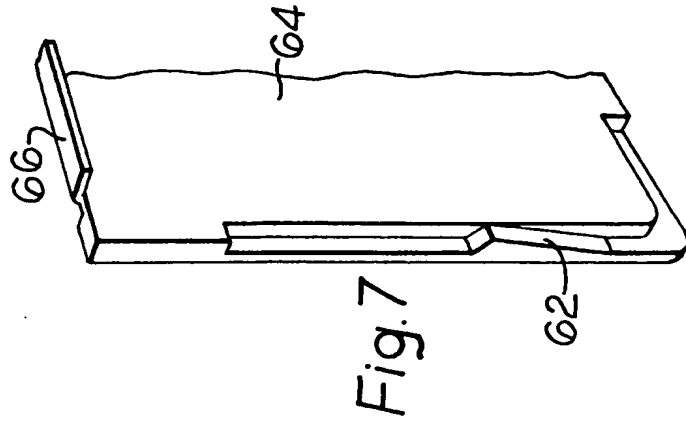
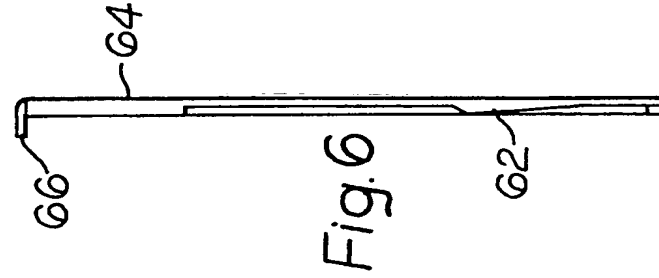
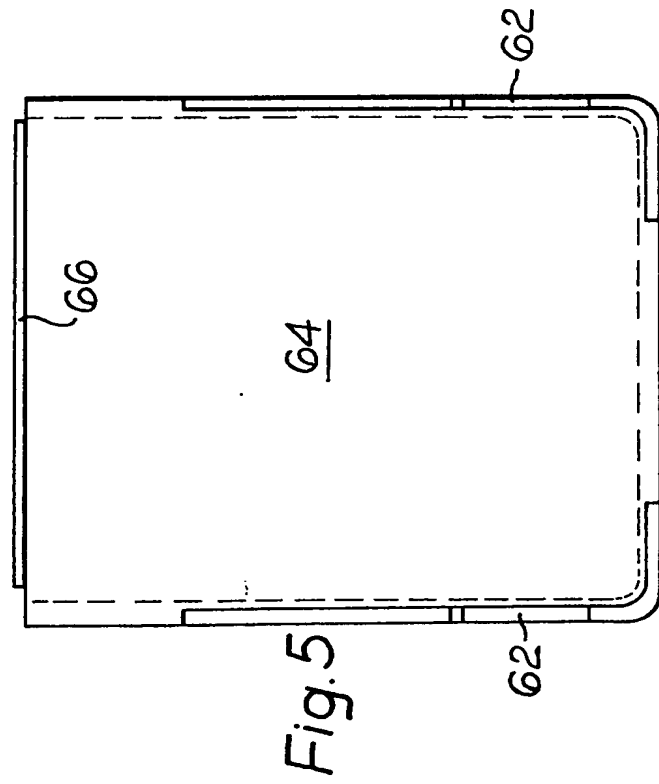
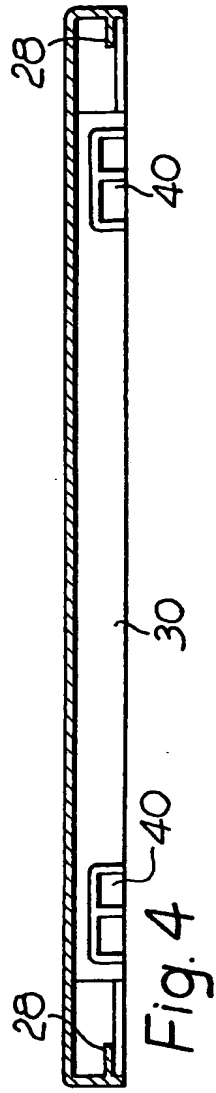
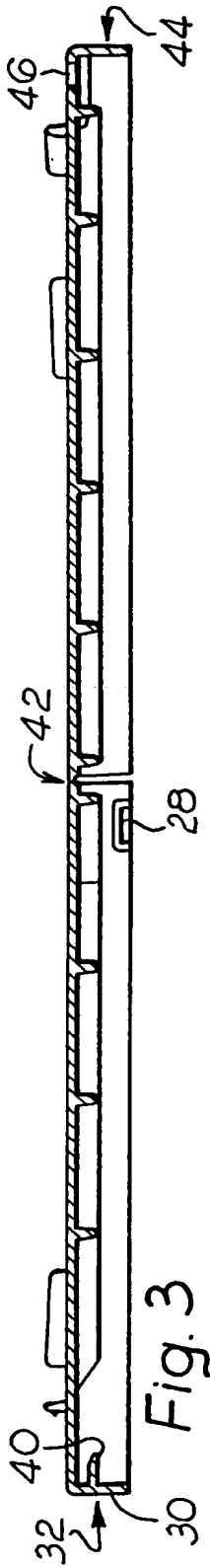
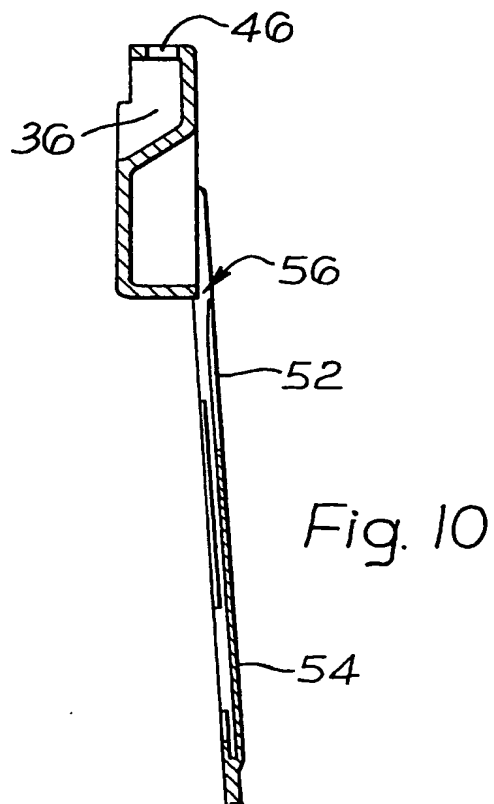
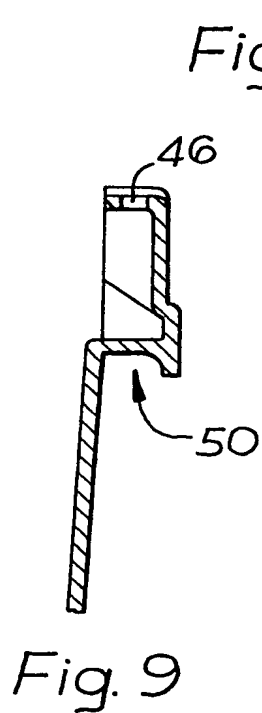
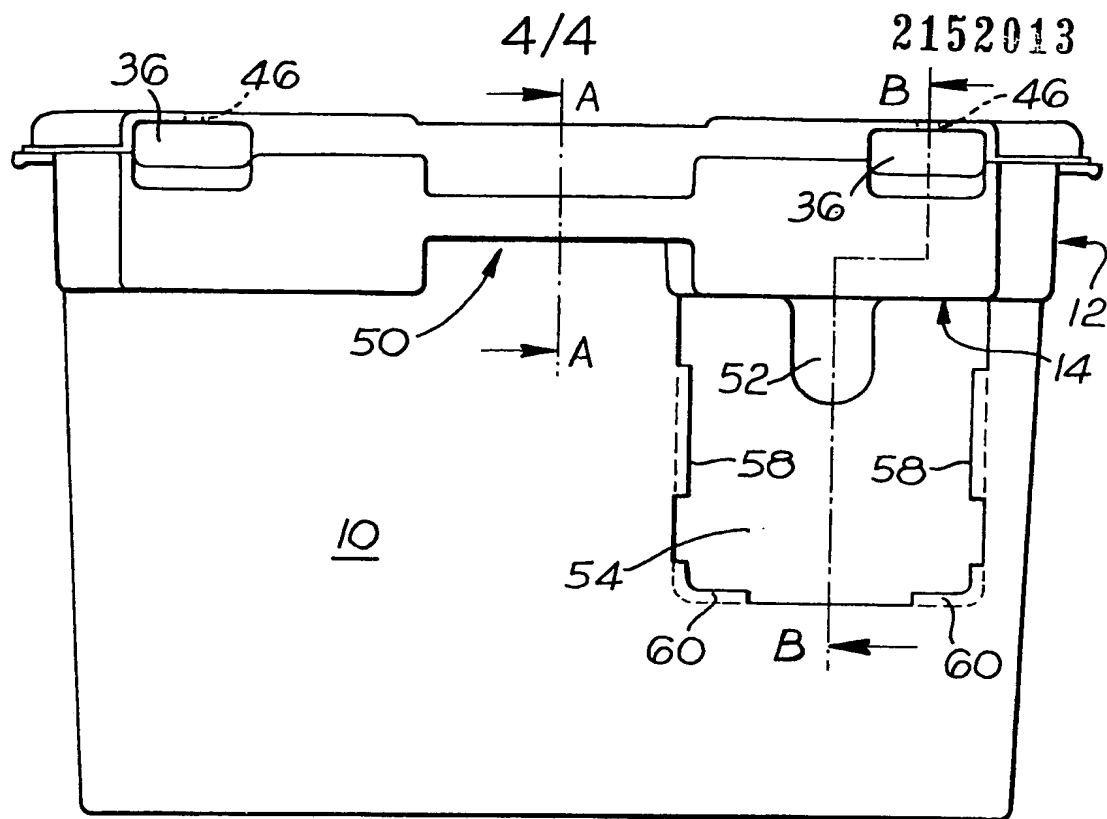


Fig.2





SPECIFICATION

Containers

5 This invention relates to containers of the kind used for the storage and transportation of goods, for example between manufacturers and warehouses, and between warehouses and individual stores.

10 According to the invention a container system comprises a number of identical containers having tapering side and end walls with a rim around the mouth of each container so that a plurality of containers may be nested in a stack; and a plurality of
15 identical lids each arranged to be engaged and secured with a corresponding container and adapted so that a series of lidded containers can be stacked in non-nesting condition.

According to a first preferred feature of the invention, the length of the container is less than
20 twice the width, the overall thickness of the lid is less than half of the depth of said rim, and the lids are hinged transversely of their length and approximately midway along their length, so that the lids
25 can be folded to halve their area and double their thickness and stored, one in each container, without affecting the nesting of the stack.

According to a second preferred feature of the invention, one wall of the container is provided
30 with a label holder formed by stepping a portion of said wall inwardly of the container to provide a backing for a label and leaving effective channel sections, said portion being located immediately below the rim and a slot being provided accessible
35 from the interior of the container so that (first) a transparent label protecting panel can be inserted through said slot and engage with said channels and (secondly) a label such as to indicate contents of the container, can be removably inserted be-
40 tween the backing and the panel.

One presently preferred embodiment of the invention will now be more particularly described with reference to the accompanying drawings wherein:-

45 *Figure 1* is a side elevation of a container showing the lid separated therefrom;

Figure 2 is a underneath plan view of the lid;

Figures 3 and 4 are cross sections of the lid taken on the lines c c and D D of *Figure 2* respectively;

50 *Figure 5* is an elevation, on an enlarged scale, of a protective label panel;

Figure 5 is a side elevation of the panel;

Figure 7 is an end view of the container as seen
55 in *Figure 1*;

Figure 8 and Figure 9 are sections taken on the lines A A and B B of *Figure 7*.

Referring to the drawings, the container is generally rectangular in plan side and end elevations,
60 the side wall 10 being seen in *Figure 1*. The container has a rim occupying some 25% of its height and generally indicated by the reference numeral 12 *Figure 1*, so that when a series of containers as shown in *Figure 1* are nested together in a stack,
65 the underside 14 of the rim of an upper container

rests on the upperside 16 of the next lowermost container, and each nested stack is of a height approximately corresponding to the number of containers in the stack multiplied by the thickness of the rim (between the lines 14 and 16) plus three quarters of the height of one container.

The rim is generally channel shaped locally for strength at its upper face, and generally centrally of the length of each of the sides the outer wall 18
75 of the channel is cut away to open access to a lug 20 extending outwardly from the inner wall 22 of the channel, and with a clearance at 24 below that lug and between it and the base 27 of the channel.

As best seen in *Figure 4*, the lid has a pair of
80 projections 28 extending inwardly from its peripheral skirt 30 which can be located in the cut away when the lid is placed approximately in position on the container, with the end 32 (*Figure 1*) displaced in the direction of arrow A *Figure 1* relative to the container itself. When the channel section upper rim is received between the sides 34 of the downwardly projecting channel-like reinforcement along the sides of the lid, and when the lid is then displaced relative to the container in the direction opposite to that of arrow A *Figure 1*, the lugs 28 pass
90 into the clearances 24 and fix the lid in position at those points.

As best seen in *Figures 7 and 9*, each end of the container is provided with a pair of recesses 36
95 near the top of the rim, these, at the end 32 *Figure 1* enable further lugs 40 *Figures 2 and 3* to engage the rim to hold the lefthand end of the lid (as seen in *Figure 1*) engaged to the body after said movement in the direction opposite to that of arrow A.

The lid may be engaged with the container in a doubled over condition, that is to say with the righthand approximate half as seen in *Figures 1 and 2* folded through 180° about the hinge line 42, which may be represented not only by a break in the skirt portions of the lid, as seen in *Figures 1 and 3* for example, but also by an actual thinned area extending across the plane of the lid itself. Indeed the righthand portion as seen in *Figures 1 and 2* needs to be displaced about that hinged axis
110 for a certain minimum amount in order to enable the proper engagement of the lugs 28 40 while the end 44 (*Figure 1* of the lid rides loosely on the rim at the righthand end of the body of the container. However, after the lug engagement has been completed, the righthand half of the lid can be closed down so as to interengage the channels sections, and the internal wall of the channel section at the end 44 may be arranged to have a snap-engagement, as via a hooked end, with the rim at the corresponding part of the body of the container so as to hold the lid in the closed position.

The lid and rim of container are provided with aligned apertures 44 through which security rivets can be fixed, these passing into the respective recesses 36 so as to be accessible from the exterior of the container for fixing.

The rim is of modified cross section between the recesses as indicated in *Figure 8* so as to provide a hand hold 50 for lifting and moving the container.

130 A label holder is provided at one or possibly at

both ends of the container. As seen in Figure 7, the end wall is apertured at 52 and the area 54 is stepped back so as to create a recess to receive both a label and a label protecting panel. Because the area 54 is bounded at its upper end by the outwardly projecting wall 14 at the bottom of the rim, it is possible for a slot 56 to be provided accessible from the interior of the container for inserting the protecting panel and labels.

It will be noted that the area 54 has a generally castellated edge leaving opposite parallel side lugs 58 and corner lugs 60. The label protecting panel as seen in Figure 5 and 6 is generally rectangular in plan and its maximum width and height correspond to the maximum width and height of the area 54, that is to say excluding the lugs. The edges of the panel are provided with cam like ribs 62 and when the panel 64 is inserted in the slot 56 and displaced downwardly, those ribs 62 snap engage with the lugs 58 and are received behind the lugs 60. The top edge of the panel 64 is provided with a flange 66 which projects to the interior of the container, and hence the panel 64 is effectively trapped in position along all four edges. When the panel 64 is so located, a label can be inserted between it and the stepped back wall 54 from the container interior, and such a label can be removed by using finger pressure applied through the cut away 52.

CLAIMS

1. A container system comprising a number of identical containers having tapering side and end walls with a rim around the mouth of each container so that a plurality of the containers may be nested in a stack with the base of each container vertically spaced from the base of the next adjacent container in the stack, by a dimension equal to the rim depth; and a plurality of identical lids each arranged to be engaged and secured with the corresponding container and adapted so that a series of lidded containers can be stacked in non-nesting condition, in which the length of the container is less than twice the width, the overall thickness of the lid is less than half of the depth of said rim, and the lids are hinged transversely of their length and approximately mid-way along their length, so that the lids can be folded to halve their area and double their thickness and be stored, one in each container, without affecting the vertical spacing in the nested stack.

2. A system as claimed in Claim 1 wherein the rim of each container is generally channel-shaped locally.

3. A container system as claimed in Claim 2 wherein the channel is cut away generally centrally of the length of each of the sides to open access to a lug extending outwardly from the inner wall of the channel, for lid fixing.

4. A container system as claimed in Claim 2 wherein the channel is provided with hand holes at opposite ends of the container.

5. A container system as claimed in any preceding claim wherein each lid comprises a pair of

substantially equal portions joined by a thinned area extending across the width of the lid and providing a hinge.

6. A container system as claimed in any preceding claim provided with a label holder in one end wall.

7. A container system as claimed in Claim 6 wherein the label holder is provided by stepping a portion of the end wall inwardly to provide a backing for a label, and leaving effective channel sections so that a label protecting panel can be inserted into the channels generally parallel to said stepped area.

8. A container system substantially as described with reference to the accompanying drawings.

Printed in the UK for HMSO, D8818935, 6/85, 7102.
Published by The Patent Office, 25 Southampton Buildings, London,
WC2A 1AY, from which copies may be obtained.